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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,727	10/31/2003	Matthew L. Seidl	SUN-P9719-SPL	1586
57960 7590 12/21/2006 SUN MICROSYSTEMS INC. C/O PARK, VAUGHAN & FLEMING LLP 2820 FIFTH STREET DAVIS, CA 95618-7759			EXAMINER PORTKA, GARY J	
			ART UNIT 2188	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		12/21/2006	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/698,727

Applicant(s)

SEIDI ET AL.

Examiner

Gary J. Portka

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 October 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4,6-14 and 16-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,6,10-14,16,20 and 21 is/are rejected.
- 7) ☒ Claim(s) 4,7-9 and 17-19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 26, 2006 has been entered.
2. Claims 1, 11, and 21 have been amended, claims 5 and 15 have been canceled by Applicant. Claims 1-4, 6-14, and 16-21 are pending.

### ***Claim Objections***

3. Claims 6 and 16 are objected to because of the following informalities: The term "the object cache" (lines 3 and 2 respectively) lacks proper antecedent basis. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 11, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gruner et al., US 4,731,734, in view of Beckert et al., US 6,801,994 B2.

6. As to claims 1, 11, and 21, Gruner discloses a method, apparatus, and computer system comprising receiving a request to access an object that includes an object identifier, a translator that converts the OID and offset into a corresponding physical address (see Gruner Abstract, Figs. 1 and 2, col. 3 lines 10-15, "Locations of data items in the memory system are specified by means of the object identifier for the object containing the data item and an offset specifying the bit at which the data item begins in the object", col. 3 lines 35-47, col. 6 lines 45-49 "the location of said data item copy in said local memory" = physical address, and col. 9 lines 11-28, which describes a logical address generated from OID and offset, which is used to convert to physical address, as is also apparent from the incorporated by reference US 4,455,602.

7. Gruner does not disclose using the OID to retrieve an object table entry, and if a write request, examining a read-only indicator within the entry, and if read-only object performing a corrective action. However, such a procedure is disclosed by Beckert. See Beckert col. 16 lines 59-64, where object page table entries indicate read-only access; also col. 19. lines 41-43, where an attempt to write a read-only object page results in a write exception. This method as taught by Beckert provides the desirable ability to set an object as read-only, and yet handle a write access request thereto. Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to retrieve an object table entry and perform corrective action if a write is requested to an indicated read-only entry, because this was a known method of providing the capability for setting objects as read-only while still able to deal with a write access thereto.

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8. As to claims 2 and 12, a physical address is used as recited, considering the physical address to come from part of the object table.

9. As to claims 3 and 13, the write exception of Beckert is a fault handler as recited.

10. As to claims 6 and 16, the system of Beckert includes a TLB which may be considered the recite object cache, requests directed thereto prior to the translator, and if causing a hit or a miss, the request respectively not sent or sent to the translator. It is not clear that the object is accessed in the object cache as interpreted, but such a (data) cache would have been well known in the art. Beckert describes a (data) write cache at col. 20 lines 1-6, and read and write caches used at TLB outputs were notoriously well known in the art for maximum speed access to data after a maximum speed translation provided by the TLB. Put another way, it would cancel the benefit of using a fast translation of a TLB if the hit in the TLB could not be quickly accessed via a cache. Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to direct requests to an object cache and if hit therein to access the object therein as recited, because Beckert taught to use a TLB to get a faster translation and using such cache to access data at a TLB translated address was well known and common in the art.

11. As to claims 10 and 20, the translator of Gruner includes hardware to translate between OID and physical address as cited hereinabove.

***Allowable Subject Matter***

12. Claims 4, 7-9, and 17-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

13. Applicant's arguments with respect to all claims have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary J. Portka whose telephone number is (571) 272-4211. The examiner can normally be reached on M-F 9:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung Sough can be reached on (571) 272-6799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

December 18, 2006

Gary J Portka  
Primary Examiner  
Art Unit 2188

**GARY PORTKA**  
**PRIMARY EXAMINER**

A handwritten signature in cursive script, appearing to read "Gary J Portka", written in black ink.